



State of Louisiana
Department of Environmental Quality



KATHLEEN BABINEAUX BLANCO
GOVERNOR

MIKE D. McDANIEL, Ph.D.
SECRETARY

Certified Mail No.

Activity No.: PER19960021
Agency Interest No. 2638

Mr. Bruce H. March
Refinery Manager
ExxonMobil Refining and Supply Company
Baton Rouge Refinery
P.O. Box 551
Baton Rouge, LA 70821-0551

RE: Prevention of Significant Deterioration (PSD) Permit PSD-LA-717, ExxonMobil Refining & Supply Company - Baton Rouge Refinery, Baton Rouge, East Baton Rouge Parish, Louisiana

Dear Mr. March:

Enclosed is your permit, PSD-LA-717. Construction of the proposed project is not allowed until such time as the corresponding operating permit is issued.

Should you have any questions concerning the permit, contact Dr. Marta Vasquez at (225) 219-3128.

public notice

Assistant Secretary

Date

CCB:mv
c: EPA Region VI



PSD-LA-717
Agency Interest No.: 2638; PER19960021

**AUTHORIZATION TO CONSTRUCT AND OPERATE A MAJOR MODIFICATION
PURSUANT TO THE PREVENTION OF SIGNIFICANT DETERIORATION REGULATIONS IN
LOUISIANA ENVIRONMENTAL REGULATORY CODE,
LAC 33:III.509**

In accordance with the provisions of the Louisiana Environmental Regulatory Code, LAC 33:III.509,

ExxonMobil Refining & Supply Company
Baton Rouge Refinery
P.O. Box 551
Baton Rouge, LA 70821-0551

is authorized to construct the Sulfur Plant (SRLA) at the ExxonMobil Refining & Supply Company - Baton Rouge Refinery near

4045 Scenic Hwy
Baton Rouge, East Baton Rouge, Louisiana

subject to the emissions limitations, monitoring requirements and other conditions set forth hereinafter.

This permit and authorization to construct shall expire at midnight on _____, 2007, unless physical on site construction has begun by such date, or binding agreements or contractual obligations to undertake a program of construction of the source are entered into by such date.

Signed this _____ day of _____, 2006.

Chuck Carr Brown, Ph.D.
Assistant Secretary
Office of Environmental Services

BRIEFING SHEET

ExxonMobil Refining & Supply Company - Baton Rouge Refinery
Agency Interest No.: 2638; PER19960021
Baton Rouge, East Baton Rouge Parish, Louisiana

PURPOSE

The BRRF will enrich the air supply to the Claus 400 Unit with oxygen. Oxygen enrichment involves blending an oxygen rich stream into a combustion air line. Additionally, BRRF will operate the second Beavon hydrogenation reactor in parallel with the primary reactor and construct other minor debottlenecks to the Claus 400 unit and Tail Gas Cleanup Unit (TGCU). As a result of these projects, BRRF will have the ability to handle higher sulfur crude oils and higher sulfur process gas oils. These projects will also allow additional sulfur removal to meet EPA's Clean Air Rules of 2004 requiring lower limits for the sulfur content in fuels used for on-road and non-road diesel engines. The Claus 100 and 200 units will not be modified.

RECOMMENDATION

Approval of the proposed construction and issuance of a permit.

REVIEWING AGENCY

Louisiana Department of Environmental Quality, Office of Environmental Services, Air Permits Division.

PROJECT DESCRIPTION

Hydrogen sulfide (H_2S) laden acid gas from the monoethanolamine (MEA) regenerators and the ammonia acid gas from the sour water strippers are converted to elemental sulfur and an environmentally acceptable off gas at the Sulfur Plant (SRLA). H_2S is converted to molten sulfur in three (3) Claus process units (SRLA-100/200/400), employing reaction furnaces and a series of catalytic reactors. The tail gas is then routed to the TGCU for removal of additional sulfur compounds.

At the TGCU, two (2) processing sections are used: the hydrogenation section and the amine section. The hydrogenation section (Beavon unit) takes the tail gas and converts the remaining sulfur compounds (primarily sulfur dioxide, carbon disulfide, and carbonyl sulfide) to H_2S and carbon dioxide. The Beavon unit consists of two (2) reactors. Currently, one is primary and one is available to serve as backup; with the planned changes, the reactors will operate in parallel. The tail gas then leaves the hydrogenation section and enters the amine section for H_2S removal via a circulating amine solution (FLEXORB™). The cleaned tail gas leaving the amine section can be emitted directly to the atmosphere (at SRLA/PV-T301) or to the incinerators (SRLA/F101 and SRLA/F201). In either disposition, off gas is analyzed using a Continuous Emission Monitoring System (CEMS) to ensure compliance with New Source Performance Standards (NSPS).

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ExxonMobil Refining & Supply Company - Baton Rouge Refinery
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Baton Rouge, East Baton Rouge Parish, Louisiana

The amine solution containing the absorbed H_2S from the tail gas stream is heated and sent to the amine regenerator tower. The amine solution is heated to remove the H_2S , thus regenerating the amine solution for re-use. The H_2S released from the regenerated amine solution is recycled to the Claus plants for conversion to elemental sulfur.

The recovered elemental sulfur is stored in the unit in sulfur pits. Vapors from the pits are sent to either the TGPU or the incinerators. Sulfur is removed from the pits and loaded onto trucks or rails cars for sale to third parties. The handling and transportation systems occasionally experience temporary disruptions. When this occurs, BRRF implements a contingency plan to manage sulfur outside the pits yet within the refinery boundaries.

For planned turnarounds of TGPU, the BRRF diverts tail gas from the Claus 100 and 200 units to the incinerators, bypassing the TGPU. When the TGPU is down, the NSPS-regulated SRLA-400 train is also shutdown.

Estimated emissions in tons per year are as follows:

Pollutant	Before	After	Change
PM ₁₀	0.84	2.06	+1.22
SO ₂	140.70	146.37	+5.67
NO _x	26.98	29.02	+2.04
CO	342.10	225.46	-116.64
VOC	0.50	27.88	+27.38
TRS	32.04	32.76	+0.72

TYPE OF REVIEW

Total Reduced Sulfur (TRS) emission rate is above the PSD significance levels. Therefore, the requested permit was reviewed in accordance with PSD regulations for TRS emissions. The selection of control technology based on the Best Available Control Technology (BACT) analysis included consideration of control of toxic materials.

Prevention of Significant Deterioration (PSD) – LAC 33:III.509

The difference between the past actual emissions and emissions from the Sulfur Recovery Oxygen Enrichment project exceeds the PSD thresholds for TRS. This project is subject to PSD review and constitutes a major modification for TRS.

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ExxonMobil Refining & Supply Company - Baton Rouge Refinery
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Pollutant	Emission Rate	PSD de Minimis
PM ₁₀	+1.53	15
SO ₂	+34.57	40
NO _x	+22.2	40
CO	+72.98	100
H ₂ S	+3.89	10
TRS	+15.85	10
H ₂ SO ₄	+0.03	7

A review of the contemporaneous period revealed one (1) TRS source, Sulfur Handling, which was included in the air quality impact analysis and added as a source.

BEST AVAILABLE CONTROL TECHNOLOGY

Under current PSD regulations, an analysis of "top down" BACT is required for the control of each regulated pollutant emitted from a modified major source in excess of the specified significant emission rates. The top down approach to the BACT process involves determining the most stringent control technique available for a similar or identical source. If it can be shown that this level of control is infeasible based on technical, environmental, energy, and/or cost considerations, then it is rejected and the next most stringent level of control is determined and similarly evaluated. This process continues until a control level is arrived at which cannot be eliminated for any technical, environmental, or economic reason. A technically feasible control strategy is one that has been demonstrated to function efficiently on identical or similar processes. BACT for the TRS emissions from SRUs is proposed as the 3-Stage Claus unit and the TGCU consisting of the Beavon technology and the FLEXSORB™-SE absorber technology meeting the NSPS Subpart J limits of 300 ppm TRS and 10 ppm H₂S. The sulfur recovery efficiency of the Claus units and the TGCU is 99.99%.

AIR QUALITY IMPACT ANALYSIS

The Sulfur Recovery Unit Oxygen Enrichment project at the BRRF will result in significant net increase in emissions of TRS. BRRF is an existing major source with respect to PSD. The facility is located in a Class II area, and is located a greater than 100 km distance from the nearest Class I area, which is the Breton Island National Wildlife Refuge. The emission increase constitutes a major modification; therefore, an air quality dispersion modeling analysis was required. The following table summarizes the criteria pollutant standards applicable to the Permit.

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ExxonMobil Refining & Supply Company - Baton Rouge Refinery
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Baton Rouge, East Baton Rouge Parish, Louisiana

Pollutant	Averaging Period	Significance Level ($\mu\text{g}/\text{m}^3$)	Monitoring Exemption Level ($\mu\text{g}/\text{m}^3$)	PSD Class II Increment ($\mu\text{g}/\text{m}^3$)	NAAQS ($\mu\text{g}/\text{m}^3$)
TRS	1-hour	—	10	—	—

As a NAAQS has not been established for TRS, modeling included a screening analysis to determine if the preconstruction monitoring exemption level would be exceeded with the proposed project. If the maximum concentration is less than the monitoring exemption level, preconstruction monitoring data is not required and the modeling analysis is complete. If the results indicated a concentration above the monitoring exemption level, one year of preconstruction monitoring data is required (minimum duration is four (4) months at the administrator's discretion) if monitoring techniques are available.

The air quality modeling methodology followed the protocol approved by the Louisiana Department of Environmental Quality (LDEQ) in a letter dated September 22, 2005. The protocol was based on procedures outlined in the *Louisiana Air Quality Division Air Quality Modeling Procedures* (LDEQ, 1999), the EPA's *Guideline on Air Quality Models* (EPA, 1995), and guidance from the EPA's *New Source Review Workshop Manual* (EPA, 1990).

ADDITIONAL IMPACTS

Soils, vegetation, and visibility will not be adversely impacted by the proposed facility, nor will any Class I area be affected.

PROCESSING TIME

Application Dated:	October 20, 2005
Application Received:	October 24, 2005
Effective Completeness:	December 8, 2005

PUBLIC NOTICE

A notice requesting public comment on the permit was published in *The Advocate*, Baton Rouge, on <date>, 2006. A copy of the public notice was mailed to concerned citizens listed in the Office of Environmental Services Public Notice Mailing List on <date>, 2006. The draft permit was also submitted to US EPA Region VI on <date>, 2006. All comments will be considered prior to the final permit decision.

PRELIMINARY DETERMINATION SUMMARY

ExxonMobil Refining & Supply Company - Baton Rouge Refinery
Agency Interest No.: 2638; PER19960021
Baton Rouge, East Baton Rouge Parish, Louisiana
PSD-LA-717
December 8, 2005

I. APPLICANT

ExxonMobil Refining and Supply Company
Baton Rouge Refinery
P.O. Box 551
Baton Rouge, LA 70821-0551

II. LOCATION

ExxonMobil Refining & Supply Company - Baton Rouge Refinery is located at 4045 Scenic Hwy, Baton Rouge, Louisiana. Approximate UTM coordinates are 3373.688 kilometers East and 674.50 kilometers North, Zone 15.

III. PROJECT DESCRIPTION

Hydrogen sulfide (H_2S) laden acid gas from the monoethanolamine (MEA) regenerators and the ammonia acid gas from the sour water strippers are converted to elemental sulfur and an environmentally acceptable off gas at the SRLA. H_2S is converted to molten sulfur in three (3) Claus process units (SRLA-100/200/400), employing reaction furnaces and a series of catalytic reactors. The tail gas is then routed to the TGPU for removal of additional sulfur compounds.

At the TGPU, two (2) processing sections are used: the hydrogenation section and the amine section. The hydrogenation section (Beavon unit) takes the tail gas and converts the remaining sulfur compounds (primarily sulfur dioxide, carbon disulfide, and carbonyl sulfide) to H_2S and carbon dioxide. The Beavon unit consists of two (2) reactors. Currently, one is primary and one is available to serve as backup; with the planned changes, the reactors will operate in parallel. The tail gas then leaves the hydrogenation section and enters the amine section for H_2S removal via a circulating amine solution (FLEXORB™). The cleaned tail gas leaving the amine section can be emitted directly to the atmosphere (at SRLA/PV-T301) or to the incinerators (SRLA/F101 and SRLA/F201). In either disposition, off gas is analyzed using a Continuous Emission Monitoring System (CEMS) to ensure compliance with New Source Performance Standards (NSPS).

The amine solution containing the absorbed H_2S from the tail gas stream is heated and sent to the amine regenerator tower. The amine solution is heated to remove the H_2S , thus regenerating the amine solution for re-use. The H_2S released from the regenerated amine solution is recycled to the Claus plants for conversion to elemental sulfur.

The recovered elemental sulfur is stored in the unit in sulfur pits. Vapors from the pits are sent to either the TGPU or the incinerators. Sulfur is removed from the pits and loaded onto

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trucks or rails cars for sale to third parties. The handling and transportation systems occasionally experience temporary disruptions. When this occurs, BRRF implements a contingency plan to manage sulfur outside the pits yet within the refinery boundaries.

For planned turnarounds of TGPU, the BRRF diverts tail gas from the Claus 100 and 200 units to the incinerators, bypassing the TGPU. When the TGPU is down, the NSPS-regulated SRLA-400 train is also shutdown.

Estimated emissions in tons per year are as follows:

Pollutant	Emission Rate	PSD de Minimis
PM ₁₀	+1.53	15
SO ₂	+34.57	40
NO _x	+22.2	40
CO	+72.98	100
H ₂ S	+3.89	10
TRS	+15.85	10
H ₂ SO ₄	+0.03	7

IV. SOURCE IMPACT ANALYSIS

A proposed net increase in the emission rate of a regulated pollutant above de minimis levels for modified major sources requires review under PSD regulations, LAC 33:III.509. PSD permit reviews of proposed new or modified major stationary sources require the following analyses:

- A. A determination of the Best Available Control Technology (BACT);
- B. Analysis of the existing air quality and a determination of whether or not preconstruction or postconstruction monitoring will be required;
- C. An analysis of the source's impact on total air quality to ensure compliance with the NAAQS;
- D. An analysis of the PSD increment consumption;
- E. An analysis of the source related growth impacts;
- F. An analysis of source related impacts on soils, vegetation, and visibility;
- G. A Class I Area impact analysis; and

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H. An analysis of the impact of toxic compound emissions.

A. BEST AVAILABLE CONTROL TECHNOLOGY

BACT applicability is determined for each project affected emission unit. To be subject to BACT requirements, project affected emission units must meet specified criteria. These requirements include a net emission increase of any BACT pollutant from the emission unit. Additionally, the net emissions increase must occur as a result of a physical change or change in the method of operation.

Each of the project affected emission units that generate TRS was reviewed for BACT applicability.

As stated in the definition of "major modification," an increase in the production rate unless such change would be prohibited under any enforceable permit condition is not a physical change or change in the method of operation. Therefore, a BACT review is not required for the project affected emission units that do not undergo a physical change. The sulfur loading operations will not be modified with this project; thus, they are not subject to BACT analysis.

BACT is defined in the Clean Air Act as:

"an emission limit based on the maximum degree of emissions reduction for each pollutant... which the permitting authority determines, on a case by case basis, taking into account energy, environmental, and economic impacts and other costs, is achievable for such facility through the application of production processes and available methods, systems, and techniques..."

The top-down BACT approach starts with the most stringent (or top) technology that has been applied to similar emissions units. A reference source of control technology is the BACT/BACT/LAER Clearinghouse (RBLC). The RBLC is a USEPA-sponsored database that lists previously USEPA-approved BACT determinations. The top control technology is either accepted as BACT or rejected based on technical or economic infeasibility. If the top control technology is rejected as BACT, the next most stringent control technology is either accepted as BACT or rejected. The top-down approach is continued until a control technology, which is found to be both technically and economically feasible, is accepted as BACT.

The minimum control efficiency to be considered in a BACT analysis must result in an emission rate less than or equal to the NSPS emission rate for the source. The applicable NSPS represents the maximum allowable emission limits from the source.

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Summary of BACT Analysis

A summary of the proposed BACT for the applicable project affected emission units is presented in the following table.

Emission Source	Pollutant	Control Technology/Work Practice
Sulfur Recovery Unit	TRS	Sulfur recovery efficiency of 99.99% with oxygen enrichment; tail gas treating unit with greater than 99.5% efficiency meeting NSPS Subpart J and NESHAP Subpart UUU limit of 300 ppmv of TRS and 10 ppmv of H ₂ S.

Sulfur Recovery Unit TRS BACT

Emissions of TRS result from the recovery of elemental sulfur from the H₂S laden acid gas streams fed to the sulfur recovery unit and subsequent treatment of the tail gas to absorb the H₂S, which is then recycled back to the Sulfur Recovery Unit (SRU). TRS from the SRU is controlled by a 3-stage Claus system with oxygen enrichment and a tail gas cleanup unit consisting of a Beavon reactor and a FLEXSORB™-SE proprietary amine absorption system.

The 3-stage Claus Unit, which converts H₂S to sulfur, contains a combustor, three (3) Claus reactor beds, sulfur condensers, and waste heat recovery system. Concentrated acid gas enters the SRU combustor where a portion of the H₂S is burned to form SO₂. In the Claus reaction, H₂S and SO₂ react to form sulfur and water. The hot combustor gas is cooled to recover waste heat and sulfur and then recycled through the three (3) catalytic reactor beds where the reaction continues. On each pass, the gas is cooled to condense any produced sulfur prior to the reaction continuation. The gas from the last condenser is sent to the TGPU for further removal of any remaining sulfur compounds. The 3-stage Claus system has a sulfur recovery efficiency of greater than 97%.

The TGPU receives tail gas from the SRU consisting primarily of H₂S and SO₂. Gas entering the TGPU from the Claus unit is combusted and hydrogenated in the Beavon reactor to convert the sulfur compounds in the gas stream to H₂S. The gases are cooled and contacted with a mild caustic solution to remove any traces of SO₂. The stream is treated with the FLEXSORB™-SE amine scrubbing technology which absorbs H₂S from the gas. The foul flex solution containing H₂S is stripped of H₂S in the Flex regenerator tower, and the H₂S is sent back to the Claus unit. The FLEXSORB™-SE proprietary amine technology is more efficient than conventional amine gas treating, is especially formulated to facilitate regenerability, and removes H₂S to 10 ppm without further controls. As indicated by the turnaround schedule for the TGPU, the FLEXSORB™-SE proprietary amine absorption process has proven to be extremely reliable. A complete turnaround of the existing TGPU in which the FLEXSORB™-SE is shutdown is planned to occur once every four (4) to five (5) years.

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to occur once every four (4) to five (5) years.

A review of the USEPA's RBLC database indicated that TRS control strategy for SRUs has been the TGCU technologies proven to meet NSPS Subpart J emission limitations. Therefore, based on the RBLC review, BACT for the TRS emissions from SRUs is proposed as the 3-Stage Claus unit and the TGCU consisting of the Beavon technology and the FLEXSORB™-SE absorber technology meeting the NSPS Subpart J limits of 300 ppm TRS and 10 ppm H₂S. The sulfur recovery efficiency of the Claus units and the TGCU is 99.99%.

B. ANALYSIS OF EXISTING AIR QUALITY

PSD regulations require an analysis of existing air quality for those pollutant emissions that increase significantly from a proposed major modification. TRS is the pollutant of concern in this case.

Screening dispersion modeling indicates maximum ground level concentrations of TRS are below the preconstruction monitoring exemption levels. Neither preconstruction monitoring, nor increment analysis, nor refined modeling is required.

Pollutant	Meteorological Year	Averaging Period	Modeled Concentration (µg/m ³)	Significance Level (µg/m ³)	Monitoring Exemption Level (µg/m ³)	Area of Impact (km)
TRS	2000	1-hour	9.35	–	10	0
TRS	2001	1-hour	9.31	–	10	0
TRS	2002	1-hour	8.90	–	10	0
TRS	2003	1-hour	6.70	–	10	0
TRS	2004	1-hour	6.23	–	10	0

Screening modeling for the expansion under PSD-LA-717 was found to be adequate.

C. NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS) ANALYSIS

As a NAAQS has not been established for TRS, modeling included a screening analysis to determine if the preconstruction monitoring exemption level would be exceeded with the proposed project. If the maximum concentration is less than the monitoring exemption level, preconstruction monitoring data is not required and the modeling analysis is complete. If the results indicated a concentration above the monitoring exemption level, one year of preconstruction monitoring data is required (minimum

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duration is four (4) months at the administrator's discretion) if monitoring techniques are available.

D. PSD INCREMENT ANALYSIS

For all criteria pollutants with significant off-property impact, a PSD Increment analysis is required. The PSD Increment analysis must demonstrate that the proposed project will neither cause nor contribute to a violation of federal ordinances for industrial expansion. The federal government has three (3) PSD Increment zoning classifications: a Class I area for restricted industrial growth (federal protected lands, etc.); a Class II area for controlled industrial growth; and a Class III area for expanded industrial growth. The BRRF is located within a Class II area; therefore, PSD Class II Increment standards apply. However a PSD Class II increment value has not been established for TRS. Therefore, a PSD increment analysis was not required for this project.

E. SOURCE RELATED GROWTH IMPACTS

The proposed project is not a new facility or an expansion but rather a debottleneck on an existing unit to increase raw material optimization. The project, resulting in the ability to handle higher sulfur crude oils and higher sulfur cat feeds, will also allow additional sulfur removal in order to meet EPA's stringent onroad and nonroad diesel fuel standards.

Construction associated with the Sulfur Recovery Unit Oxygen Enrichment project is scheduled to commence during the year 2007. Many of the temporary employees for construction activities will be drawn from the local work force. No additional permanent employees will be required as there will be no new or expanded operations at the facility. Therefore, the permit will make no significant change in the number of residents for whom East Baton Rouge Parish provides municipal services.

In addition, the Sulfur Recovery Unit Oxygen Enrichment project should not result in any significant residential, commercial, or industrial growth outside the facility because existing, surrounding establishments will likely support any locally dependent construction and operation needs. Thus, no significant air quality degradation due to associated residential, commercial, or industrial growth is expected.

F. SOILS, VEGETATION, AND VISIBILITY IMPACTS

There will be no significant impact on area soils, vegetation, or visibility.

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G. CLASS I AREA IMPACTS

The nearest Class I area is the Breton National Wildlife Area located in the Gulf of Mexico, approximately 200 km southeast of BRRF. Assessment of the potential impact to visibility (regional haze analysis) is required if the source is located within 100 km of a Class I area. As such, a Class I area visibility analysis will not be required as a result of the Sulfur Recovery Unit Oxygen Enrichment project.

H. TOXIC IMPACT

The selection of control technology based on the BACT analysis included consideration of control of toxic emissions.

V. CONCLUSION

The Air Permits Division has made a preliminary determination to approve the modification to ExxonMobil Refining & Supply Company - Baton Rouge Refinery, Baton Rouge, East Baton Rouge Parish, Louisiana, subject to the attached specific and general conditions. In the event of a discrepancy in the provisions found in the application and those in this Preliminary Determination Summary, the Preliminary Determination Summary shall prevail.

PRELIMINARY DETERMINATION SUMMARY

ExxonMobil Refining & Supply Company - Baton Rouge Refinery
Agency Interest No.: 2638; PER19960021
Baton Rouge, East Baton Rouge Parish, Louisiana
PSD-LA-717
December 8, 2005

This permit is issued under the following conditions:

1. The permittee is authorized to operate in conformity with the specifications submitted to the Louisiana Department of Environmental Quality (LDEQ) as analyzed in LDEQ's document entitled "Preliminary Determination Summary" dated December 8, 2005, and subject to the following emission limitations and other specified conditions. Specifications submitted to LDEQ are contained in the original application dated October 2, 1996, along with supplemental information dated October 20, 2005.

MAXIMUM ALLOWABLE OPERATING AND EMISSION RATES

Emission Point No.	Description	Units	CS ₂	COS	H ₂ S
SRLA/LOAD	SRLA Sulfur Truck Loading	lb/hr			6.72
		TPY			1.84
SRLA/SH	SRLA Sulfur Handling	TPY			0.27
SRLA/PV-T301	SRLA TGCUT-301 Vent	lb/hr	35.73	60.18	1.77
(70)		TPY	3.49	22.00	4.70

**LOUISIANA AIR EMISSION PERMIT
GENERAL CONDITIONS**

- I. This permit is issued on the basis of the emissions reported in the application for approval of emissions and in no way guarantees that the design scheme presented will be capable of controlling the emissions to the type and quantities stated. Failure to install, properly operate and/or maintain all proposed control measures and/or equipment as specified in the application and supplemental information shall be considered a violation of the permit and LAC 33:III.501. If the emissions are determined to be greater than those allowed by the permit (e.g. during the shakedown period for new or modified equipment) or if proposed control measures and/or equipment are not installed or do not perform according to design efficiency, an application to modify the permit must be submitted. All terms and conditions of this permit shall remain in effect unless and until revised by the permitting authority.
- II. The permittee is subject to all applicable provisions of the Louisiana Air Quality Regulations. Violation of the terms and conditions of the permit constitutes a violation of these regulations.
- III. The Emission Rates for Criteria Pollutants, Emission Rates for TAP/HAP & Other Pollutants, and Specific Requirements sections or, where included, Emission Inventory Questionnaire sheets establish the emission limitations and are a part of the permit. Any operating limitations are noted in the Specific Requirements or, where included, Tables 2 and 3 of the permit. The synopsis is based on the application and Emission Inventory Questionnaire dated October 2, 1996, along with supplemental information dated October 20, 2005.
- IV. This permit shall become invalid, for the sources not constructed, if:
 - A. Construction is not commenced, or binding agreements or contractual obligations to undertake a program of construction of the project are not entered into, within two (2) years (18 months for PSD permits) after issuance of this permit, or;
 - B. If construction is discontinued for a period of two (2) years (18 months for PSD permits) or more.

The administrative authority may extend this time period upon a satisfactory showing that an extension is justified.

This provision does not apply to the time period between construction of the approved phases of a phased construction project. However, each phase must commence construction within two (2) years (18 months for PSD permits) of its projected and approved commencement date.

- V. The permittee shall submit semiannual reports of progress outlining the status of construction, noting any design changes, modifications or alterations in the construction schedule which have or may have an effect on the emission rates or ambient air quality levels. These reports shall continue to be submitted until such time as construction is

**LOUISIANA AIR EMISSION PERMIT
GENERAL CONDITIONS**

certified as being complete. Furthermore, for any significant change in the design, prior approval shall be obtained from the Office of Environmental Services, Air Permits Division.

- VI. The permittee shall notify the Department of Environmental Quality, Office of Environmental Services, Air Permits Division within ten (10) calendar days from the date that construction is certified as complete and the estimated date of start-up of operation. The appropriate Regional Office shall also be so notified within the same time frame.
- VII. Any emissions testing performed for purposes of demonstrating compliance with the limitations set forth in paragraph III shall be conducted in accordance with the methods described in the Specific Conditions and, where included, Tables 1, 2, 3, 4, and 5 of this permit. Any deviation from or modification of the methods used for testing shall have prior approval from the Office of Environmental Assessment, Air Quality Assessment Division.
- VIII. The emission testing described in paragraph VII above, or established in the specific conditions of this permit, shall be conducted within sixty (60) days after achieving normal production rate or after the end of the shakedown period, but in no event later than 180 days after initial start-up (or restart-up after modification). The Office of Environmental Assessment, Air Quality Assessment Division shall be notified at least (30) days prior to testing and shall be given the opportunity to conduct a pretest meeting and observe the emission testing. The test results shall be submitted to the Air Quality Assessment Division within sixty (60) days after the complete testing. As required by LAC 33:III.913, the permittee shall provide necessary sampling ports in stacks or ducts and such other safe and proper sampling and testing facilities for proper determination of the emission limits.
- IX. The permittee shall, within 180 days after start-up and shakedown of each project or unit, report to the Office of Environmental Compliance, Surveillance Division any significant difference in operating emission rates as compared to those limitations specified in paragraph III. This report shall also include, but not be limited to, malfunctions and upsets. A permit modification shall be submitted, if necessary, as required in Condition I.
- X. The permittee shall retain records of all information resulting from monitoring activities and information indicating operating parameters as specified in the specific conditions of this permit for a minimum of at least five (5) years.
- XI. If for any reason the permittee does not comply with, or will not be able to comply with, the emission limitations specified in this permit, the permittee shall provide the Office of Environmental Compliance, Surveillance Division with a written report as specified below.
 - A. A written report shall be submitted within 7 days of any emission in excess of permit requirements by an amount greater than the Reportable Quantity established for that pollutant in LAC 33.I.Chapter 39.
 - B. A written report shall be submitted within 7 days of the initial occurrence of any

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emission in excess of permit requirements, regardless of the amount, where such emission occurs over a period of seven days or longer.

- C. A written report shall be submitted quarterly to address all emission limitation exceedances not included in paragraphs A or B above. The schedule for submittal of quarterly reports shall be no later than the dates specified below for any emission limitation exceedances occurring during the corresponding specified calendar quarter:

1. Report by June 30 to cover January through March
2. Report by September 30 to cover April through June
3. Report by December 31 to cover July through September
4. Report by March 31 to cover October through December

- D. Each report submitted in accordance with this condition shall contain the following information:

1. Description of noncomplying emission(s);
2. Cause of noncompliance;
3. Anticipated time the noncompliance is expected to continue, or if corrected, the duration of the period of noncompliance;
4. Steps taken by the permittee to reduce and eliminate the noncomplying emissions; and
5. Steps taken by the permittee to prevent recurrences of the noncomplying emissions.

- E. Any written report submitted in advance of the timeframes specified above, in accordance with an applicable regulation, may serve to meet the reporting requirements of this condition provided all information specified above is included. For Part 70 sources, reports submitted in accordance with Part 70 General Condition R shall serve to meet the requirements of this condition provided all specified information is included. Reporting under this condition does not relieve the permittee from the reporting requirements of any applicable regulation, including LAC 33.I.Chapter 39, LAC 33.III.Chapter 9, and LAC 33.III.5107.

- XII. Permittee shall allow the authorized officers and employees of the Department of Environmental Quality, at all reasonable times and upon presentation of identification, to:

- A. Enter upon the permittee's premises where regulated facilities are located, regulated activities are conducted or where records required under this permit are kept;
- B. Have access to and copy any records that are required to be kept under the terms and conditions of this permit, the Louisiana Air Quality Regulations, or the Act;

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- C. Inspect any facilities, equipment (including monitoring methods and an operation and maintenance inspection), or operations regulated under this permit; and
 - D. Sample or monitor, for the purpose of assuring compliance with this permit or as otherwise authorized by the Act or regulations adopted thereunder, any substances or parameters at any location.
- XIII. If samples are taken under Section XII.D. above, the officer or employee obtaining such samples shall give the owner, operator or agent in charge a receipt describing the sample obtained. If requested prior to leaving the premises, a portion of each sample equal in volume or weight to the portion retained shall be given to the owner, operator or agent in charge. If an analysis is made of such samples, a copy of the analysis shall be furnished promptly to the owner, operator or agency in charge.
- XIV. The permittee shall allow authorized officers and employees of the Department of Environmental Quality, upon presentation of identification, to enter upon the permittee's premises to investigate potential or alleged violations of the Act or the rules and regulations adopted thereunder. In such investigations, the permittee shall be notified at the time entrance is requested of the nature of the suspected violation. Inspections under this subsection shall be limited to the aspects of alleged violations. However, this shall not in any way preclude prosecution of all violations found.
- XV. The permittee shall comply with the reporting requirements specified under LAC 33:III.919 as well as notification requirements specified under LAC 33:III.927.
- XVI. In the event of any change in ownership of the source described in this permit, the permittee and the succeeding owner shall notify the Office of Environmental Services, Air Permits Division, within ninety (90) days after the event, to amend this permit.
- XVII. Very small emissions to the air resulting from routine operations, that are predictable, expected, periodic, and quantifiable and that are submitted by the permitted facility and approved by the Air Permits Division are considered authorized discharges. Approved activities are noted in the General Condition XVII Activities List of this permit. To be approved as an authorized discharge, these very small releases must:
- 1. Generally be less than 5 TPY
 - 2. Be less than the minimum emission rate (MER)
 - 3. Be scheduled daily, weekly, monthly, etc., or
 - 4. Be necessary prior to plant startup or after shutdown [line or compressor pressuring/depressuring for example]

These releases are not included in the permit totals because they are small and will have an insignificant impact on air quality. This general condition does not authorize the maintenance of a nuisance, or a danger to public health and safety. The permitted facility

**LOUISIANA AIR EMISSION PERMIT
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must comply with all applicable requirements, including release reporting under LAC 33:I.3901.

- XVIII. Provisions of this permit may be appealed in writing pursuant to La. R.S. 30:2024(A) within 30 days from receipt of the permit. Only those provisions specifically appealed will be suspended by a request for hearing, unless the secretary or the assistant secretary elects to suspend other provisions as well. Construction cannot proceed except as specifically approved by the secretary or assistant secretary. A request for hearing must be sent to the following:

Attention: Office of the Secretary, Legal Services Division
La. Dept. of Environmental Quality
Post Office Box 4302
Baton Rouge, Louisiana 70821-4302

- XIX. Certain Part 70 general conditions may duplicate or conflict with state general conditions. To the extent that any Part 70 conditions conflict with state general conditions, then the Part 70 general conditions control. To the extent that any Part 70 general conditions duplicate any state general conditions, then such state and Part 70 provisions will be enforced as if there is only one condition rather than two conditions.

TABLE I: BACT COST SUMMARY

Notes:

- a) Negative impacts: 1) economic, 2) environmental, 3) energy, 4) safety
- b) Technically infeasible, economic analysis was not performed

ExxonMobil Refining & Supply Company - Baton Rouge Refinery
Agency Interest No.: 2638; PER19960021
Baton Rouge, East Baton Rouge Parish, Louisiana

TABLE II
AIR QUALITY ANALYSIS SUMMARY

Pollutant	Averaging Period	Preliminary Screening Conc. ($\mu\text{g}/\text{m}^3$)	Significant Monitoring Conc. ($\mu\text{g}/\text{m}^3$)	Current Monitored Conc. ($\mu\text{g}/\text{m}^3$)	Level of Significant Impact ($\mu\text{g}/\text{m}^3$)	Maximum Modeled Conc. ($\mu\text{g}/\text{m}^3$)	Modeled + Background Conc. ($\mu\text{g}/\text{m}^3$)	National Ambient Air Quality Standard ($\mu\text{g}/\text{m}^3$)	Modeled PSD Increment Consumption ($\mu\text{g}/\text{m}^3$)	Allowable Class II PSD Increment ($\mu\text{g}/\text{m}^3$)
Particulate	24-hour									
	Annual									
Nitrogen Dioxide	Annual									
CO	1-hour									
	8-hour									
Ozone										
TRS	1-hour	9.35	10	NR	NR	NR	NR	NR	NR	NR

NR = Not Required